

AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. (Original) An abrasive machine, comprising:

an upper abrasive plate rotating to abrade an upper face of a work piece, said upper abrasive plate having a plurality of slurry holes for feeding slurry to the work piece;

a lower abrasive plate rotating to abrade a lower face of the work piece, said lower abrasive plate sandwiching the work piece with said upper abrasive plate so as to abrade the both faces of the work piece;

a slurry feeding unit pressurizing and feeding the slurry;

a plurality of slurry paths respectively connecting the slurry holes to said slurry feeding unit;

a plurality of valve mechanisms being respectively provided to said slurry paths so as to control flows of the slurry; and

a control section for controlling said valve mechanisms.

2. (Original) The abrasive machine according to claim 1,

wherein said control section controls degree of opening said valve mechanisms so as to control feeding the slurry to each of the slurry holes.

3. (Original) The abrasive machine according to claim 1,

wherein said slurry feeding unit is a pressurizing unit capable of feeding the slurry with fixed pressure,

said pressurizing unit is connected to the slurry holes by a distributor, and

said valve mechanisms are electromagnetic valves.

4. (Original) The abrasive machine according to claim 1, further comprising:

a carrier having a through-hole in which the work piece is set so as to abrade the both faces of the work piece, said carrier being provided between said upper abrasive plate and said lower abrasive plate;

a carrier holder holding an outer edge of said carrier; and

a crank mechanism for orbiting said carrier holder.

5. (Original) The abrasive machine according to claim 4, further comprising:

a shaft being connected to said upper abrasive plate;

a rotating mechanism for rotating said shaft; and
a slurry feeding tube being provided in said shaft,
wherein said slurry paths are connecting tubes respectively connecting the
slurry holes to said slurry feeding tube.

6. (Original) The abrasive machine according to claim 5,
wherein said shaft includes a water path for feeding water for cooling said
upper abrasive plate.

7. (Original) The abrasive machine according to claim 1, further comprising:
a carrier having a through-hole in which the work piece is set so as to
abrade the both faces of the work piece, said carrier being provided between said
upper abrasive plate and said lower abrasive plate;

a sun gear engaging with an outer edge of said carrier; and
an internal gear engaging with the outer edge of said carrier,
wherein said carrier spins and orbits along said internal gear.

8. (Original) The abrasive machine according to claim 7, further comprising:
a supporting plate being provided to said upper abrasive plate, said
supporting plate supporting a distributor; and

a plurality of connecting tubes respectively connecting the slurry holes to said distributor.

9. (Original) A method of abrading a work piece in a machine comprising:

an upper abrasive plate rotating to abrade an upper face of a work piece, said upper abrasive plate having a plurality of slurry holes for feeding slurry to the work piece;

a lower abrasive plate rotating to abrade a lower face of the work piece, said lower abrasive plate sandwiching the work piece with said upper abrasive plate so as to abrade the both faces of the work piece;

a slurry feeding unit pressurizing and feeding the slurry;

a plurality of slurry paths respectively connecting the slurry holes to said slurry feeding unit;

a plurality of valve mechanisms respectively provided to said slurry paths so as to control flows of the slurry; and

a control section for controlling said valve mechanisms, said control section controlling said valve mechanisms so as to control amount of the slurry fed from said slurry feeding unit to each of the slurry holes while abrading the work piece.

10. (Original) The method according to claim 9,

wherein said control section feeds the slurry via the selected slurry hole so as to remove the work piece from said upper abrasive plate by liquid pressure when said upper abrasive plate is moved away from said lower abrasive plate.

11. (New) An abrasive machine, comprising:

an upper abrasive plate capable of rotating to abrade an upper face of a work piece, said upper abrasive plate having a plurality of slurry holes therethrough for feeding a slurry to the work piece;

a lower abrasive plate capable of rotating to abrade a lower face of the work piece, said lower abrasive plate sandwiching the work piece with said upper abrasive plate therebetween so as to abrade both the upper and the lower faces of the work piece;

a slurry pressurizing and feeding unit for pressurizing and feeding the slurry;

a plurality of slurry paths connecting the slurry holes to said slurry pressurizing and feeding unit;

a plurality of valves in said slurry paths for controlling flows of the slurry; and

a control section for controlling said valves, such that slurry is fed only through predetermined slurry paths to slurry holes which are in communication with a particular workpiece based on a size and shape of said particular workpiece, and such that a flow of slurry through any slurry path to a corresponding slurry hole is capable of being independently regulated and can be varied over time during performance of an abrasion process on said workpiece.

12. (New) The abrasive machine according to claim 11,

wherein said control section controls opening and closing of said valves to control feeding slurry to the slurry holes.

13. (New) The abrasive machine according to claim 11,

wherein said slurry pressurizing and feeding unit is capable of feeding the slurry at a fixed pressure,

said slurry pressurizing and feeding unit is connected to the slurry holes by a distributor, and

said valves are electromagnetic valves.

14. (New) The abrasive machine according to claim 11, further comprising:

a carrier, positioned between said upper abrasive plate and said lower abrasive plate, and having a through-hole in which the work piece is set so as to abrade both the upper and the lower faces of the work piece;

a carrier holder for holding an outer edge of said carrier; and

a crank mechanism for orbiting said carrier holder.

15. (New) The abrasive machine according to claim 14, further comprising:

a shaft connected to said upper abrasive plate;

a rotating mechanism for rotating said shaft; and

a slurry feeding tube in said shaft;

wherein said slurry paths connect with a plurality of tubes which respectively connect the slurry holes to said slurry feeding tube.

16. (New) The abrasive machine according to claim 15,

wherein said shaft includes a water path for feeding water for cooling said upper abrasive plate.

17. (New) The abrasive machine according to claim 11, further comprising:

a carrier, positioned between said upper abrasive plate and said lower abrasive plate, and having a through-hole in which the work piece is set so as to abrade both the upper and the lower faces of the work piece;

a sun gear engaging with an outer edge of said carrier; and

an internal gear engaging with the outer edge of said carrier;

wherein said carrier spins and orbits along said internal gear.

18. (New) The abrasive machine according to claim 17, further comprising:

a distributor;

a supporting plate in communication with said upper abrasive plate, for supporting said distributor; and

a plurality of connecting tubes connecting the slurry holes to said distributor.

19. (New) A method of abrading a work piece in a machine, said method comprising:

placing a work piece having an upper face and a lower face in said machine, said workpiece being sandwiched between an upper abrasive plate capable of rotating to abrade said upper face of the work piece, and a lower abrasive plate capable of rotating to abrade said lower face of said workpiece;

pressurizing a slurry to be fed to said workpiece;
feeding said pressurized slurry to said workpiece through a plurality of slurry paths connected to a plurality of slurry holes in said upper abrasive plate, while rotating said upper abrasive plate and said lower abrasive plate; and

controlling a flow amount of pressurized slurry being fed to said workpiece by controlling a plurality of flow control valves in said plurality of slurry paths.

20. (New) The method according to claim 19 further comprising utilizing liquid pressure of said slurry fed through said slurry holes to remove said workpiece from said upper abrasive plate when, as said upper abrasive plate and said lower abrasive plate are retracted from said workpiece after completion of abrasion of said workpiece, said workpiece adheres to said upper abrasive plate.